

Industrial Foundations in the Danish Economy¹²³

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February 19, 2013

Abstract

Industrial Foundations (foundations that own business companies) are found around the world e.g in Northern Europe, Germany, the US and India, but nowhere do they appear to be as economically important as in Denmark. In this paper we review their share of the Danish economy. We find that foundation-owned companies account for 5-10% of the Danish economy depending on measurement. However, they constitute the bulk of Danish stock market capitalization and R&D expenditure, and they also contribute disproportionately to international business activity. Finally the industrial foundations make charitable donations of approximately 0.5% of Danish GDP, primarily to research.

¹ Prepared for discussion at the center for Corporate Governance, Copenhagen Business School, 30 November 2012.

² This paper has benefited from research assistance by Christa Børsting and Peter Faxøe.

³ This paper is part of the The Research Project on Industrial Foundations. Support for this project by Copenhagen Business School, the LEO Foundation, the Rambøll Foundation, the Novo Nordisk Foundation, the Lundbeck Foundation, the Lauritzen Foundation, the COWI Foundation, the Augustinus Foundation, the Carlsberg Foundation and Knud Højgaard's Foundation is gratefully acknowledged.

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Introduction

Industrial foundations are foundations that own business companies⁵. The foundations are independent legal persons without owners or members. Industrial foundations are found in many countries around the world, but nowhere are they as important as in Denmark. For example, the largest Danish company in terms of market value Novo Nordisk is foundation-owned, and so is the second largest, the shipping conglomerate A. P. Moller-Maersk, and foundation-owned companies account for 68% of the leading Danish stock market index C20.

In this paper we map the contribution of industrial foundations to the Danish economy focusing overall economic activity, employment, R&D and internationalization. Although industrial foundations are especially important as owners of large companies, we also assess economic significance of the foundations, which play a role by charitable donations as well as independent economic activity. In further studies we aim to go on to an assessment of their economic impact, which is of course not the same as their present economic activity, since, for example, companies not owned by industrial foundations might instead be owned by other owners such as families or pension funds.

We do not deal with historical origins of industrial foundations or why there are so many of them in Denmark. Neither do we compare to other countries. The question here is strictly to assess how important foundation ownership is to the Danish economy.

As for definitions, we define an industrial foundation as a private foundation that holds a voting majority in a joint stock corporation. To be sure, there are other definitions. For example, a foundation may do business in its own name, it may own controlling minority share of a company or it may own a share of a partnership. However, the largest and economically most important industrial foundations invariably do business through ownership of a company.

⁵ For an explanation of the institutional structure and relevant theories see Thomsen (2012): What do We Know about Industrial Foundations?

Foundation Equity

The Danish Business authority keeps a register of industrial foundations, which (under the law of industrial foundations) must report to it, if they have controlling influence in a business company, or if they have significant business activity. Adding up the (non-negative) equity values from this register, we find that industrial foundations account for some 350 billion DKK.

350 bill DKK is of course a sizeable sum which corresponds to 25% of total equity registered in Danish companies in 2010. As a share of total household wealth of almost 6000 bill DKK (or as a share of the total Danish capital stock) it is a somewhat smaller 6%.

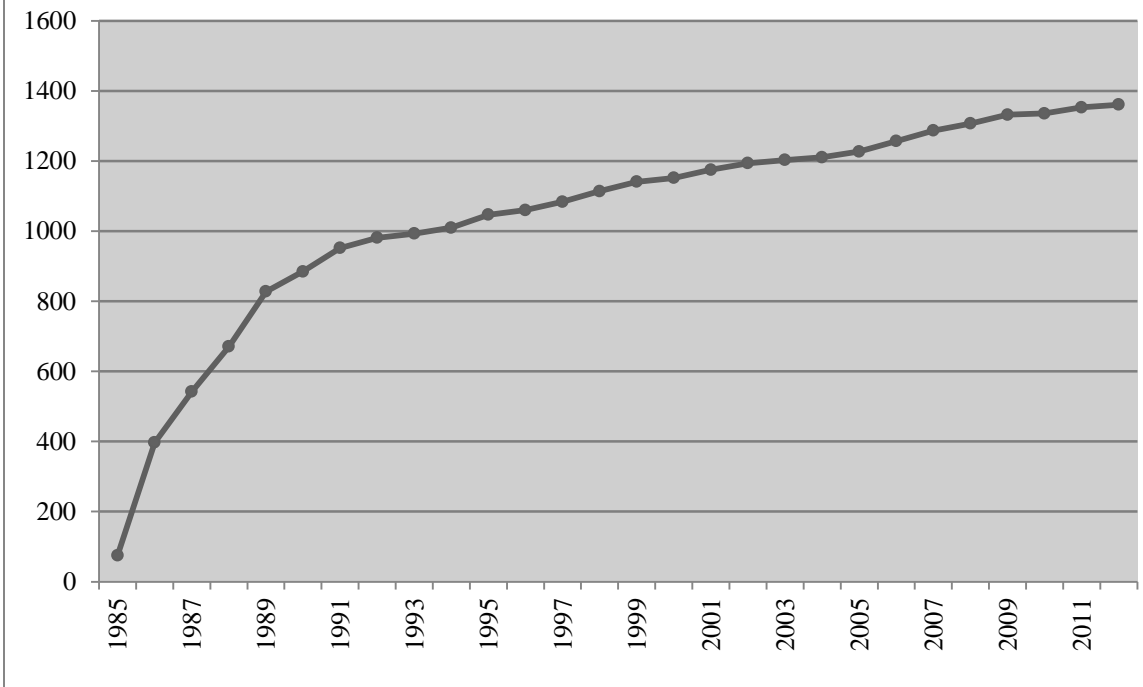
350 bill DKK may be an understatement, however. First, these are book values and so may understate the market value of equity. Secondly, not all foundations choose to consolidate their accounts so that they may not fully capture the assets that they own. Third, in many cases, foundations have a controlling in companies which are listed or have other minority investors, or they may extend their research further by borrowing and issuing debt. The foundations may therefore control assets and business activities which are larger than their foundation equity would warrant.

To illustrate, the listed shares of the largest foundation-owned company, Novo Nordisk, are valued at more than 400 bill DKK (October 2012). The second largest in terms of market value, A. P. Moller Maersk, is valued at more than 160 bill DKK. Obviously, the foundations do not own all of this stock (since a large part of it is held by minority investors), but the two foundations alone control market values which substantially exceed the total capital in the foundation register. We will return to these issues later in this paper.

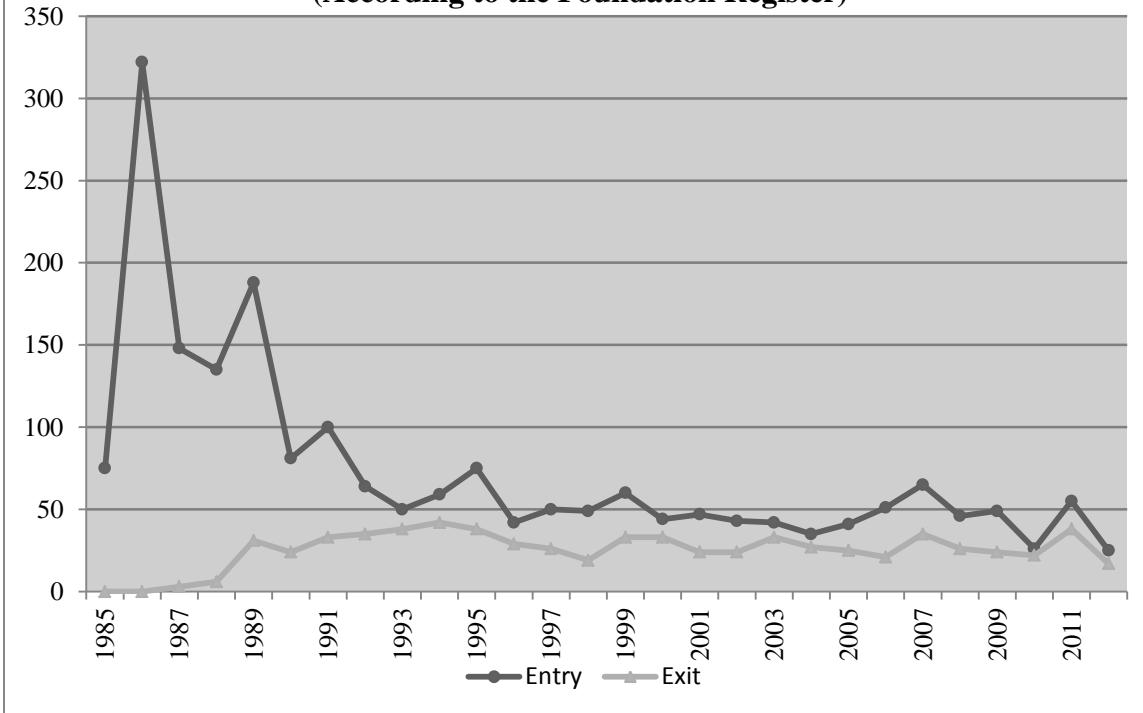
Number of foundations

Below we chart the number of industrial foundations registered since the foundation register was established in 1985 (figure 1) and the number entries and exits (figure 2). The number increases over time. The steep rise in the beginning of the period no doubt reflects that existing foundations signed up, but since the beginning of the 1990s around 50 new foundations have been established annually, whereas a somewhat smaller number have exited. Exit here could be that the foundation has been dissolved, that its business activity has dropped below the trifle limit of 250.000 DKK in sales or that it has sold or closed its business.

**Figure 1: Number of danish industrial foundations
(According to the Foundation register)**

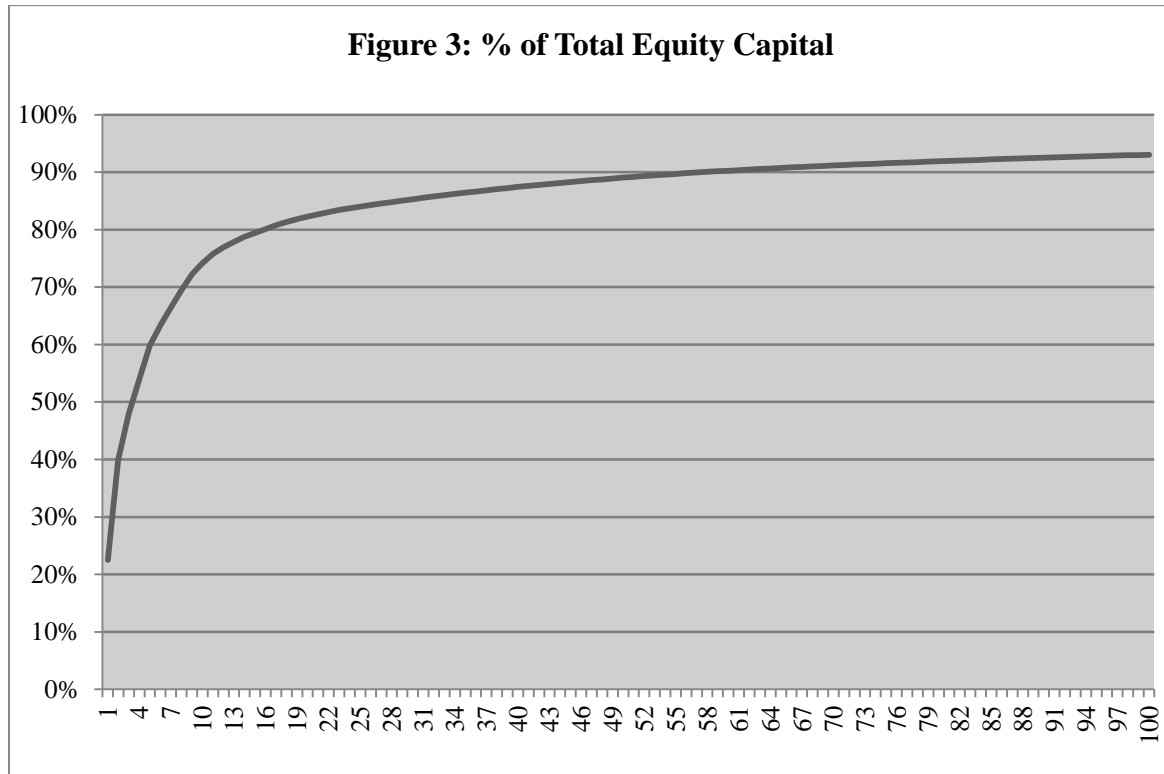


**Figure 2: Entry and exit of industrial ifundations
(According to the Foundation Register)**



Size distribution of Industrial Foundations

The industrial foundations follow a skewed size distribution (many small, few large), which implies high concentration of capital and other measures of size or economic activity. The largest foundations account for an overwhelming share. This is illustrated in figure 3 below, which draws the largest 100 foundations' share of total equity capital of all foundations.



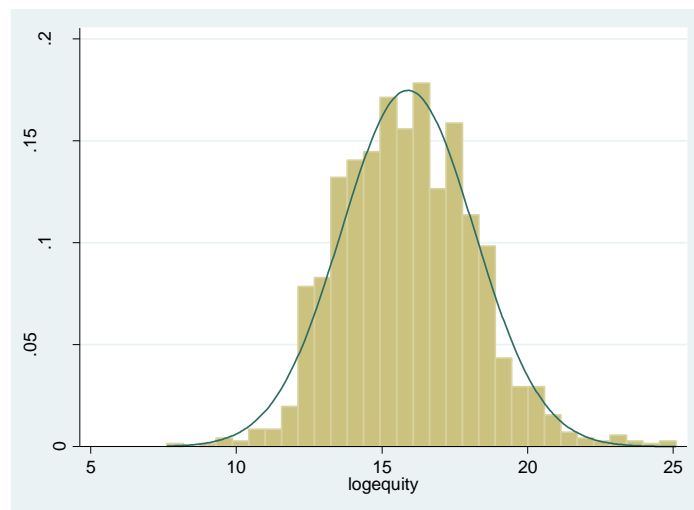
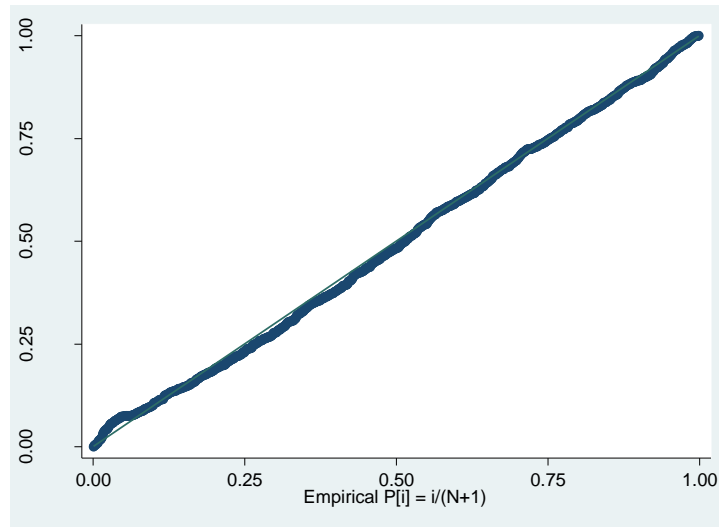
We observe that the largest 10 industrial foundations account for some 74% of total equity capital, the 30 largest account for 85% and the 100 largest account for some 93% of all industrial foundation equity. Since measures of size and economic activity tend to be highly correlated this means that we can provide a good assessment of the importance of industrial foundations to the Danish Economy by focusing on the largest entities.

Statistically, foundation sizes seem to conform to a standardized lognormal distribution⁶. In the graphs below we fit the size distribution to a standardized cumulative lognormal distribution and a lognormal density function.

The literature on firm size distributions has shown that skewed distributions like the lognormal emerge spontaneously from random growth processes in which growth rates

⁶ The Z score in a Shapiro Wilks test for log normality is -1.083 with a significance level of 0.86060 it indicates that we cannot reject the null hypothesis of lognormality.

are independent of size, and there are no economies or diseconomies of scale in the sense that large firms grow systematically faster or slower than small firms. Since industrial foundations grow mainly through ownership of business firms it is understandable that their size distributions will be similar



A consequence of the size distribution is that most industrial foundations are quite small. 300 of them have equity of less than 1 mill DKK, and roughly 400 have less than 2 mill. The median industrial foundation has equity of 7 mill DKK, while the mean equity is as high as 277 mill DKK.

Growth in Foundation Assets

Despite the financial crisis foundation equity has increased in recent years from a total book value of 258 bill DKK in 2007 to 350 Bill DKK in 2011, which is a 36% increase over the period. Thus, they have weathered the crisis quite, and it seems possible that they exert a stabilizing influence on the Danish economy.

Table 1: Foundation Equity 2007- 2011

	Foundation Equity, Bill DKK	Growth, %	100 Largest, %
2007	258		0,92
2008	230	-0,11	0,9
2009	291	0,26	0,92
2010	292	0	0,92
2011	350	0,2	0,93

The size structure seems to have been relative constant with the 100 largest foundations accounting for more than 90% of the total endowment in recent years. We also tested specifically whether the largest industrial foundations had higher or lower growth rates, but found no significant differences. More generally, however, there appears to be some tendency for smaller foundations to grow faster, although this effect becomes insignificant in size-weighted regressions.

Failure rates

The failure rate has been a small, though not insignificant 1.1% a year as may be seen from table 2 below.

Table 2: Foundation failure rates

	Failure rates
2008	1,6%
2009	2,5%
2010	0.2%
2011	1,1%
Total	1,1%

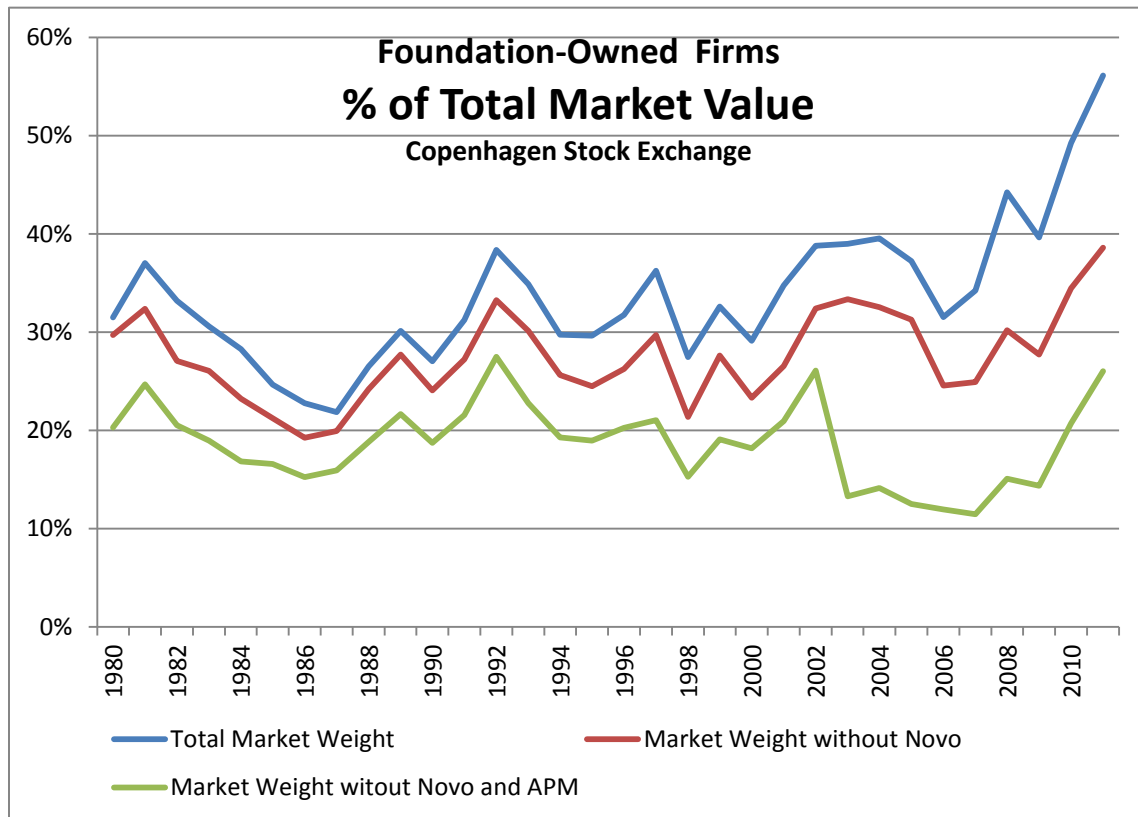
Considering the financial crisis this figure seems relatively modest. The failure rates for companies have been much higher during the same period, above 10% a year. This however is at least partly attributable to size differences. Exit rates are particularly high for small firms with limited economic activity, while industrial foundations are subject to minimum size requirements with regards to sales and assets (>250.000 DKK). Moreover, shareholders or partners can repatriate the capital they have invested in a company while donations to an industrial foundations are irrevocable, and they cannot be dissolved with content by the regulator. Thus the incentives and opportunities to close companies are greater than for foundations.

Market valuations

An alternative to examining book values of foundations or foundation-owned companies are to study the market values of foundation-owned companies defined as companies in which a foundation has a voting majority. Below we chart their share of the total market value of firms listed at Copenhagen Stock Exchange since 1980.

The total value of listed foundation-owned companies was around 700 billion DKK in 2011 or some 54% of the total market capitalization of Copenhagen Stock Exchange CSE. This includes only the market value of equity, and including debt in an overall measure of capital employed would get the number on the other side of 1 trillion DKK.

In figure 4 we track changes over time dividing by official measures of market capitalization, which deduct repurchased shares held by the companies. It is evident that the economic importance of the foundation-owned companies has doubled over time from an already considerable share of 30% around 1980 to almost 70% according to this measure. The change is not attributable to new foundation-owned companies becoming listed. In fact the number of listed foundation-owned companies is quite stable around 16-20 companies. Rather existing foundation-owned companies have managed to grow faster than other listed companies.



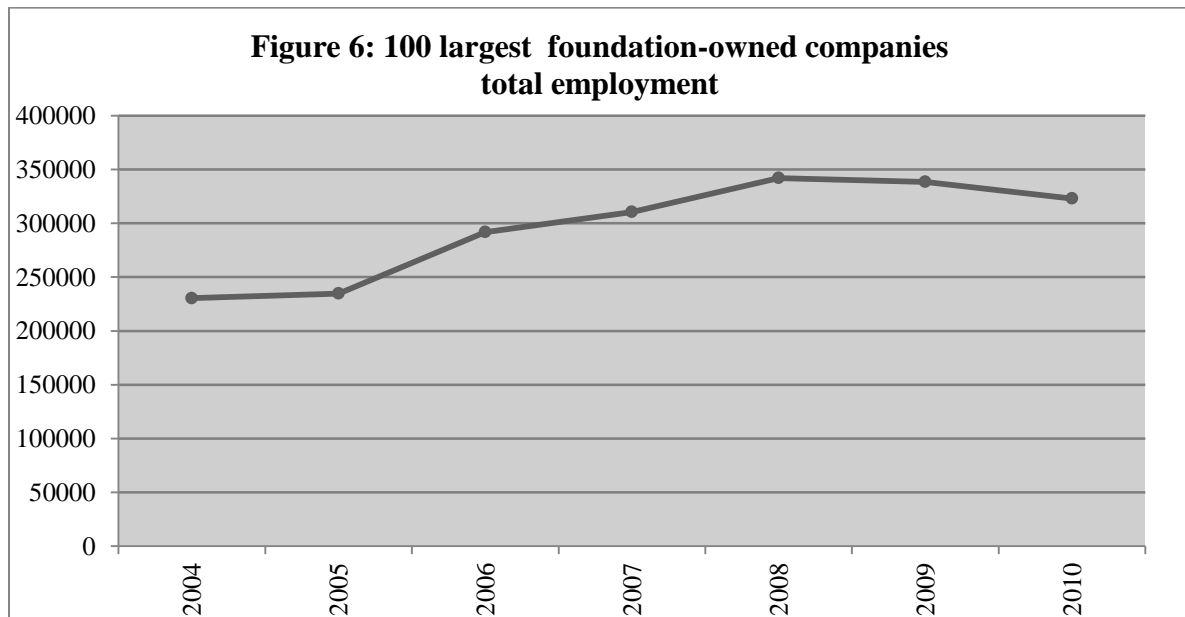
Further analysis reveals that both the tremendous increase of foundation ownership and its high overall level is mainly attributable to two very large companies, the pharmaceutical company Novo Nordisk and the shipping conglomerate A. P. Moller-Maersk. Excluding these two companies, foundation ownership accounts for around 20% of Copenhagen Stock Exchange, and the share has been relatively stable since 1980 (figure 5). We are thus faced with a small-numbers problem since the bulk of economic activity takes place in a few very large companies. This complicates statistical analysis and may call for more case-based approaches.

The largest foundation-owned companies

As mentioned, an alternative to population-level data is to examine activity of the largest foundations and the companies that they own, since we know that they account for the vast majority of aggregate activity. In this section we examine activities in the 100 largest foundation-owned firms. Because attrition and missing data tend to dilute the sample over time, we build on an existing, slightly larger sample of 120 companies.

Employment

As is evident from figure 6, these companies currently account for some 300.000 jobs having increased total employment by 100.000 (or 50%) since 2004.



Many of these jobs are clearly outside Denmark. According to an official estimate as of September 2012 foundation-owned companies account for some 100.000 full time jobs in Denmark. This would imply that the rest of their workforce, some 200.000 jobs, are employed outside Denmark.

According to Statistics Denmark, Danish companies have a total of some 1.2 million employees outside Denmark (about the same as they have in Denmark), of which, however, a single labor intensive company, the service conglomerate ISS, has some 500.000+ employees (534.000 worldwide). This would indicate that the industrial foundations account for roughly 5% of total domestic Danish employment, 8% of domestic private sector employment and 16% of international employment. Excluding ISS they account for some 28% of international employment.

Danish companies do not systematically report a breakdown of employment by nationality. However, we can get some indications from a questionnaire as reported below.

Table 3: Employment in 19 large foundation-owned firms

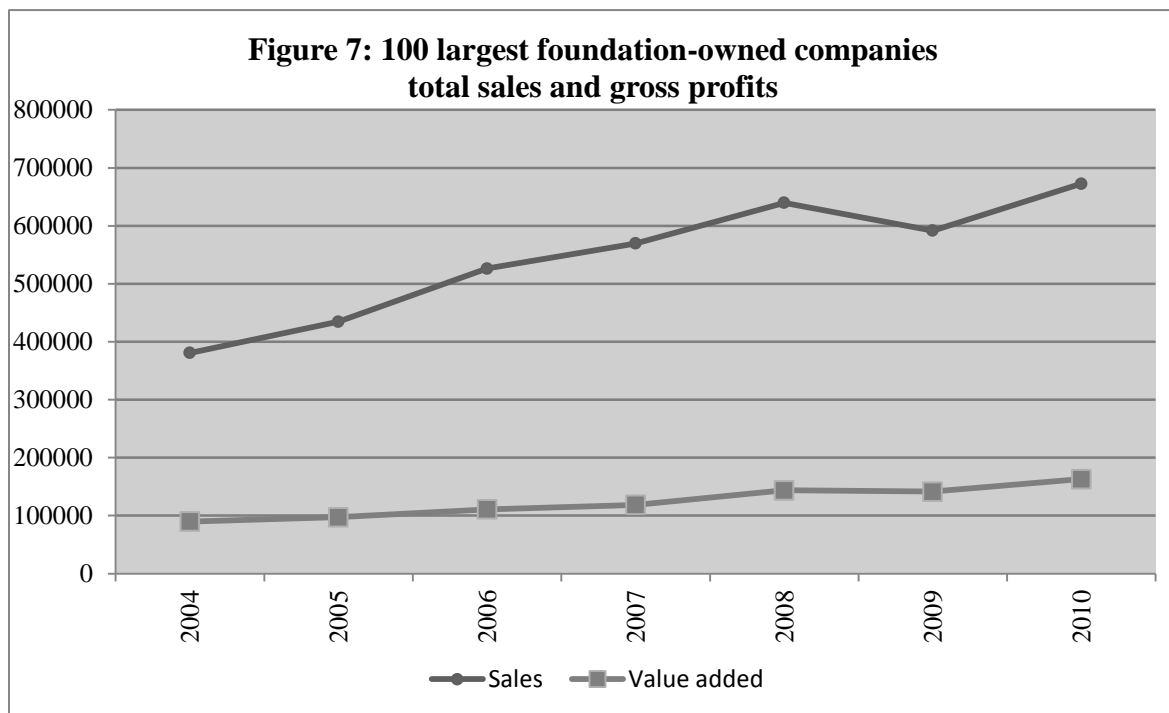
	Denmark	International
Employment	72.599	171.313
% of total Danish employment	3%	6%

We observe that 19 large foundation-owned firms employ some 72.000 employees in Denmark which corresponds to 3% of total Danish employment.

However they employ more than twice as many, 170.000, outside Denmark. This would correspond to 6% of total Danish employment, although this is of course not a share of Danish employment.

Sales and value added (gross profits)

Below we portray the trend in total sales and gross profits of the largest foundation-owned companies 2004-2010 (figure 7). Gross profits are similar to value added in that one deducts purchases from total sales. As can be seen both of these figures increase over time. Total sales have nearly doubled from 2004-2010 and so have gross profits.



We estimate total sales of these companies at 670 bill DKK (101 companies) and gross profits at 160 bill DKK. In a separate estimate the Danish authorities have estimated that all foundation-owned companies account for some 100 bill DKK in value added equivalent to some 7% of total value added in the Danish national accounts (1500 bill DKK). Reconciling these figures, it would seem again that a large share of their activity takes place outside Denmark.

Again, we can decompose the sales numbers for some large foundation-owned companies based on a questionnaire.

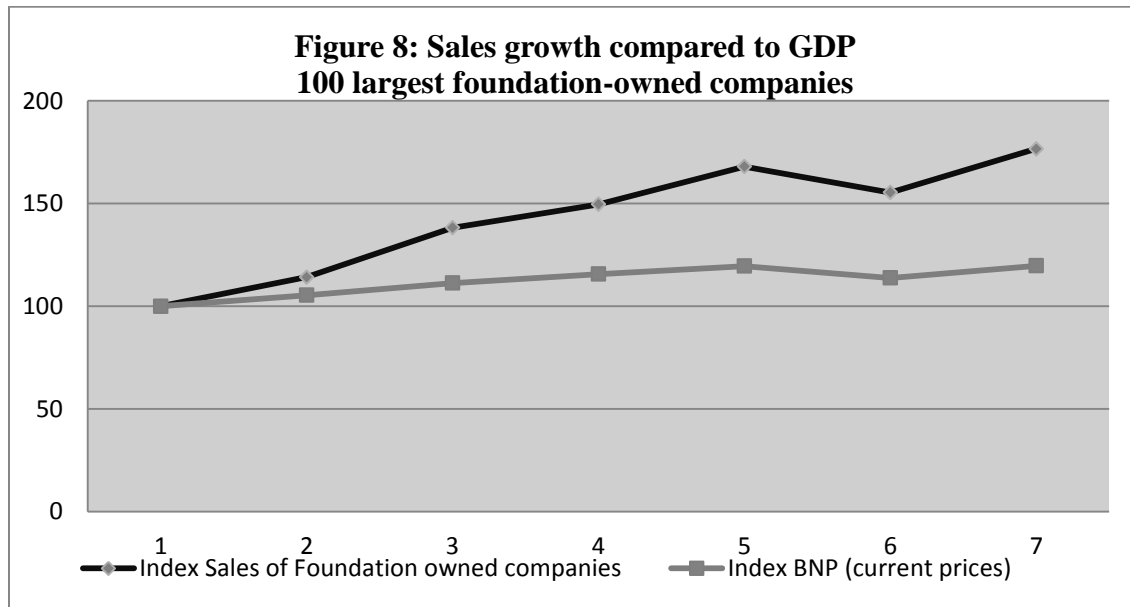
Table 4: Sales of 18 large foundation-owned companies inside and outside Denmark 2011

	Domestic Sales	International Sales
Total Sales Bill DKK	75.9	409.1
% of Danish Production Value	2%	13%

We observe that 18 foundations account for 75 billion DKK of sales or 2% of total production value according to the Danish national account statistics. However, their international revenue is 5 times higher than that, i.e. more than 400 billion DKK.

The growth of foundation-owned companies

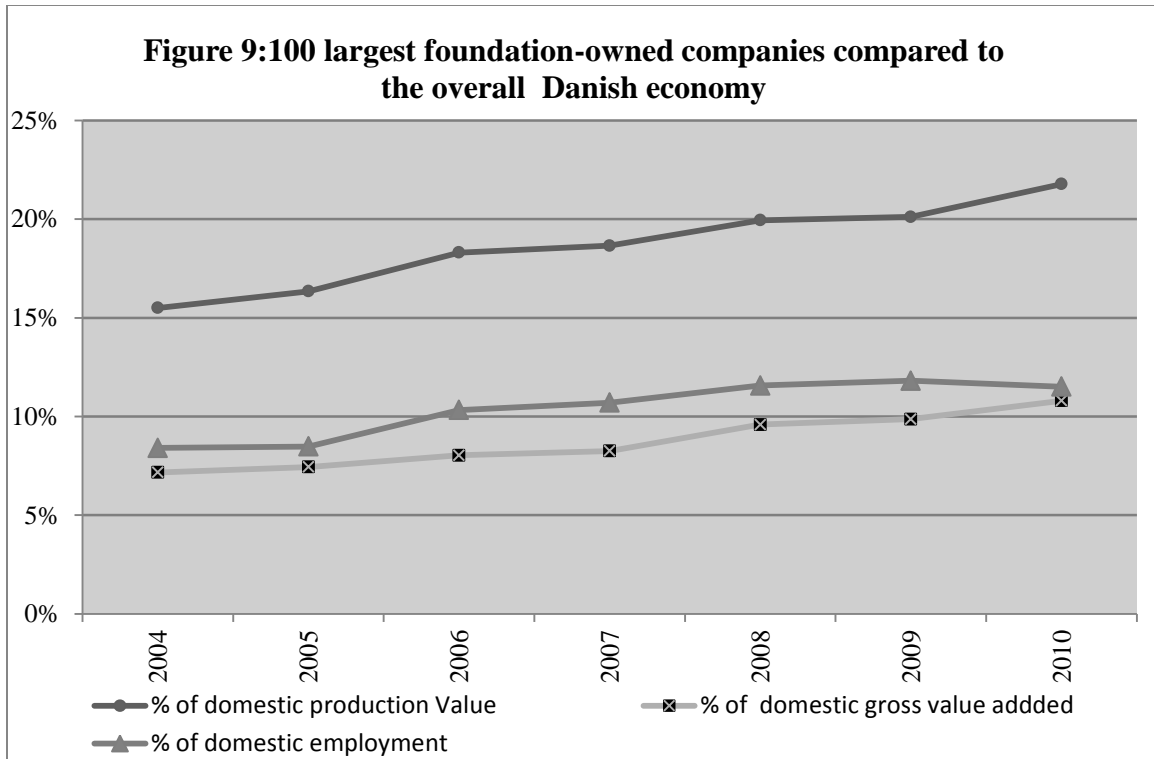
The large foundation-owned companies have outgrown the Danish economy as is evident from figure 8 below where we compare their overall sales indexed valued of nominal GNP 2004-2010.



Since 2004 their sales have grown by 76% compared to the growth of only 20% in nominal Danish GNP. As a percentage of GDP their sales have grown from 26% to 38% over the period. Note however, the bulk the growth has taken place outside Denmark.

The growth of the foundations means that their economic significance has increased over time. Below we measure the size of the 100 largest Danish companies compared to the size of the total economy measured in terms of production value, gross value added and total employment (figure 9). For example, as a share production value their overall sales have increased from 15 to 22%, compared to domestic Danish value added from 7 to 11% or from 8 to 12% as a share of domestic employment.

Again, as mentioned, these figures include the sizeable international activity of the foundation-owned companies so their domestic employment will account for a much smaller share. However, the figures indicate that the foundation-owned companies have been a dynamic part of the Danish economy over the period and have grown much faster than the Danish economy as a whole.

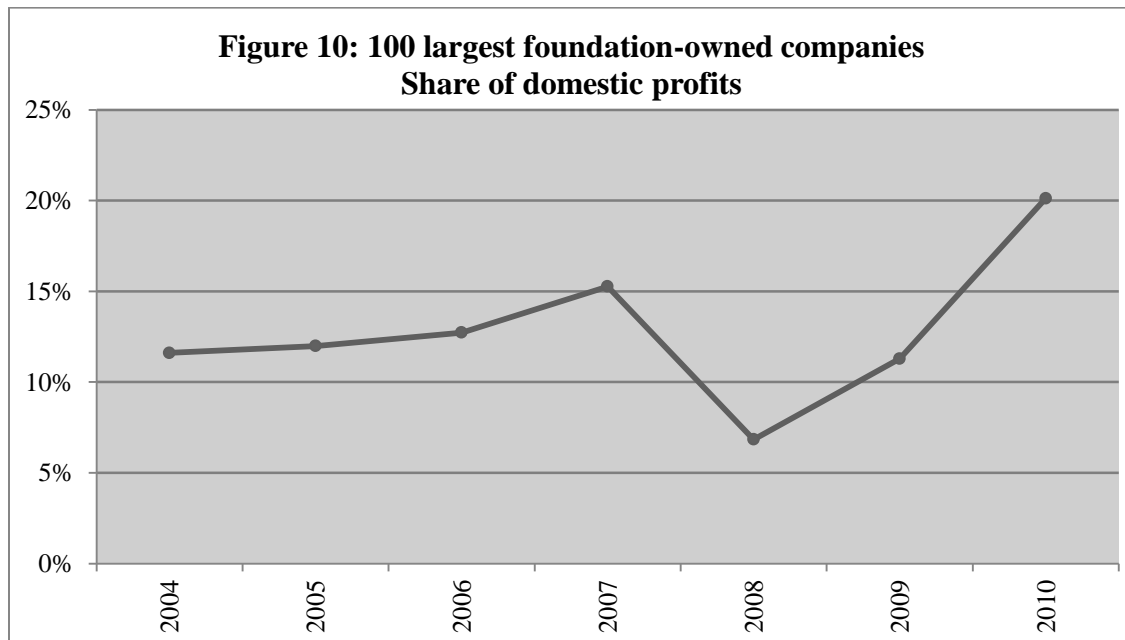


To these figures we must also add an unspecified contribution from the 1100 or so smaller industrial foundations, which also contribute to overall Danish employment and economic growth. Based on their share of foundation capital we would estimate that there are some 15.000 jobs in this part of the economy or a value added of some 8 billion DKK, most of which will presumably be within Denmark.

Profit contribution

An alternative measure of the economic significance of industrial foundations is the profit earned by the foundation-owned companies on their operations - domestic as well as international.

Below we add up the earnings of the largest industrial foundations and divide by the total gross surplus created in the Danish economy according to the Danish national accounts (figure 10) (Statistics Denmark).



As may be seen, their profit share varies significantly over time between 7% and 20% with an average share of 13% - somewhat higher than their share of Danish employment and value added.

Obviously, not all of these profits are repatriated to Denmark. Some of it goes to foreign minority investors. But a lot of it does. On average the 1000 largest foundations own some 75% of the total stock (capital) in their companies. Moreover, Danish minority investors such as institutional investors also hold significant stock in the listed foundation-owned companies. In other companies founding families or employees hold minority stock, much of which will remain in Denmark.

In table 5 below we construct a balanced panel of firms to double check for movement caused by changes in the population rather than time trends.

Table 5: The growth of large foundation-owned firms
(balanced panel)

	Sales Bill DKK	Employees
2004	360,1	209576
2005	412,2	212723
2006	488,4	266301
2007	527,3	280709
2008	596	314324
2009	554	312491
2010	635	299043
No of firms	73	93

We observe the same trends as above. Company sales grew by 76% and total employment grew by 42% over the 2004-2010 period.

Normal and abnormal growth

Firm growth consists of growth by merger/acquisition (M&A) and organic growth. Growth by M&A will often involve little or even negative net growth since one entity (the acquired or merged company) tends to disappear as it is incorporated into another. Generally speaking we expect firm growth to consist of relatively modest, normal organic growth interrupted at irregular but less frequent intervals by “jumps” because of mergers and acquisitions.

We do not (at least not presently) have access to systematic data on M&A of the foundation-owned companies, but we are able to decompose their growth into episodes of high growth (typical of M&A) and normal growth (typical of organic growth) as a proxy. We use a 30% sales growth rate as a cut off.

Table 6: Growth of the 100 largest foundation-owned companies 2004-2010

Firm growth	Frequency %	Growth in sales Bill DKK	%	Employment growth, jobs	%
Normal growth	92%	221,3	78%	64284	71%
High growth	8%	61,7	22%	26194	29%
Total	100%	283	100%	90478	100%

Note: High growth: > 30% sales growth per year, Normal growth <30% a year.

As we see in table 6 the foundation-owned companies grow by a leap of 30% or more in 8% of firm years or on average once in twelve years. These growth spurts accounted for 22% of their sales growth and 29% of their employment growth.

In absolute numbers, the foundation-owned companies grew by 283 bill DKK in terms of sales over the 2004-2010 period, of which 61,7 billion or 22% was “high growth”. They increased their employment by 90478 employees, of which 26194 – or 29% - happened as a result of high growth events.

Altogether, these figures indicate that the growth of foundation-owned companies is driven mainly by normal, organic growth rather than the less frequent jumps created for example by mergers and acquisitions.

Economic Stability

In addition to their importance measured by magnitude of economic activity industrial foundations may also be important as stable owners of business companies. Compared to other owners, industrial foundations may be more long term and less subject to earnings pressures. In some cases a “steady mode of doing business” is even written into their charters. They may also by nature (as non-profit entities) be more inclined to take into consideration the interests of employees and other stakeholders. Finally, because of their mandate to benefit their companies and because they tend to have concentrated business holdings, they may be more risk averse than most other owners.

For the societies in which they operate (including of course Denmark) this may have important advantages. Foundations may tend to stabilize the economy because they are less likely to fail and to fall into financial distress. Employees, tax authorities, suppliers and other stakeholders may value this stability, particularly of course in times of crisis.

In table 7 below we examine whether foundation-owned companies are in fact less likely to cut jobs, experience sales loss and negative earnings. We compare the 100 largest foundation-owned companies to a control group of listed (non-foundation owned) companies from the Nordic countries over the 2004-2010 period.

Table 7: Probability (frequency) of job losses, negative sales growth and negative earnings

Ownership	Jobloss > 10%	Sales loss > 10%	Deficit	N (firm years)
Non-foundation	11%	18.2%	26.7%	5170
Foundation	8.7%	5.6%	16.9%	537
Significance	.033**	<0.000***	<0.000**	

** : Significant at the 5% level, ***: significant at the 10% level.

As may be seen, foundation owned companies are less likely to experience large job losses (> 10%), large declines in sales (> 10%) and deficits. The differences are large and highly significant.

We cannot deduce directly from this that foundation-owned companies behave differently because they are foundation-owned. It may be for example, that foundation-owned companies operate in sectors or niches which shelter them from economic shocks and therefore make it easier to avoid losses. For example, pharmaceutical firms are known to be less susceptible to the business cycle. It may be that industrial foundation just happen to cluster in such industries or niches, or it may be that foundation-owned companies explicitly aim for such niches.

However, we can say that functionally the foundation-owned companies are less likely to experience bad outcomes and therefore display greater economic stability than listed companies. To some, this may be part of their social contribution.

To probe deeper into this question we regress job losses on foundation ownership in table 8 below controlling for other factors such as company size, profitability and time effects.

Table 8: Job loss and Foundation ownership (logistic regression, odds)

Model	1	2	3
Dependent Variable	Job loss > 10%	Job loss > 10%	Job loss > 10%
Independent Variables			
Foundation ownership	0.71** (0.11)	0.86 (0.14)	0.77 (0.34)
Company size (assets)		0.99 (0.00)	0.99 (0.00)
ROA		0.99*** (-6,84)	0.99*** (0.002)
Foundation Ownership * ROA (interaction effect)		0.95*** (0.015)	0.94*** (0.015)
Time Effects	NO	NO	NO
Industry Effects	NO	NO	NO
Constant	0.13*** (0.01)	0.13*** (0.006)	0.000 (0.00)
Pseudo R-square	0.0012	0.02	0.11
Chisquare test	4.92**	70.85***	441.6***
N (firm years)	5717	5551	5537

*= significant at 10% level, **=significant at 5% level, ***=significant at 1% level (t-tests). Note. Job loss (dummy) equals 1 if there is a net decline in employment of 10% or more year on year (else 0). Size (assets), leverage (equity/assets), and ROA have been winsorized.

In model 1 we observe that foundation ownership impact the odds of significant job loss by a factor 0.71 so that the population odds of 0.13 are reduced to $0.71 \cdot 0.13 = 0.09$. The odds here indicate that we will observe odds of 1:7 for job cuts in listed firms but 1:11 for foundation-owned companies.

The odds effect remain roughly the same (in model 2) but becomes insignificant when we interact foundation-ownership with profitability (ROA) and control for company size. The interaction effect is strongly significant. In other words, foundation-owned companies mainly stand out when profitability is negative (or low), while it is not much different in good times when few companies regardless of ownership bother with major job cuts.

In model 3 we further control for industry and time effects, but the interaction effect remains significant and is now stronger than in model 2. In other words, there is quite robust statistical evidence that foundation-owned companies are less likely to cut jobs in downturns.

For further evidence on the stability of foundation ownership we test the within firm standard deviation of selected variables – defined as the standard deviation of changes over time (table 9). The idea is to examine how much these variable fluctuate over time as a function of ownership – filtering away the substantial variation between foundation-owned companies.

Table 9: Within Firm standard deviation

	Non Foundation ownership	Foundation Ownership	Significance Level
Number of employees	1954	828	0.000***
Company size (assets)	2205	563	0.000***
Sales growth	35	21	0.000***
Return on Assets ROA	16	9	0.000***
Solvency (equity/assets)	13	10	0.000***
Q value	1,2	0,3	0.000***

As is evident from the table the time variation within foundation-owned firms is in every case substantially smaller than in the non-foundation owned listed companies. The differences are highly significant statistically.

Again, the evidence indicates that foundation-owned companies are economically more stable than other companies. We cannot say with certainty whether this is because they value stability more than other firms or because they happen to be located in particularly stable niches or industries.

However, it seems most likely that the figures reflect differences in objectives and behavior. First, this is what theory would predict. Secondly the differences are pervasive and tend to persist when we control for background variables. Finally, although it is indeed possible to point to foundation ownership in industries that are sheltered from the business cycle, it is found in many industries some of which (such as shipping) are highly volatile.

Research and Development

Danish firms do not systematically report R&D figures, so again we have to rely on questionnaires for a breakdown. In table 10 below we have information for 19 large foundation-owned firms.

Table 10: R&D in 19 large foundation-owned firms

Bill DKK	24.1
% of total Danish R&D	43%

We observe that these large companies conduct 43% or close to half of total Danish R&D.

To this figure we can add another 3 bill DKK from charitable donations from industrial foundations to research so it is likely that the industrial foundations contribute more than half of the total Danish R&D expenditure. Since public sector expenditures account for 1/3 of total R&D, the contribution to private sector R&D is much higher, perhaps 75%.

There is even less information available on the international spread. Below we report a breakdown for only 5 foundation-owned firms (table 11).

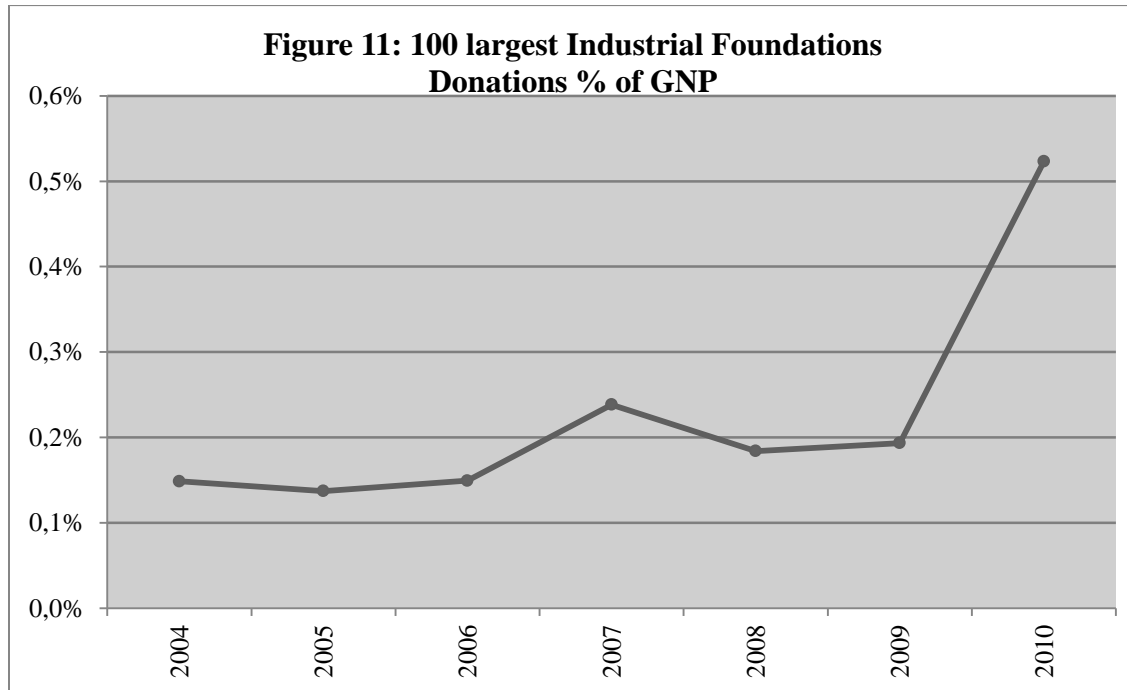
Table 11: R&D breakdown in 5 large foundation-owned firms

	Domestic	International	Total
R&D expenditures bill DKK	9.6	3.6	13.2
% of total Danish R&D	17%	6%	23%

We find that 5 foundation-owned firms invest 13.2 bill DKK in R&D of which the bulk 9.6 bill DKK is in Denmark. This corresponds to almost 20% of total Danish R&D.

Foundation donations

Industrial foundations also play an important role as donors since most of them have charitable as well as industrial goals. We estimate their overall donations to be in the order of 9 bill DKK a year or 0.3% of GDP in 2010 (figure 11). From other studies we know that half of these donations go to research, most of it to medical and pharmaceutical research, so their donations play an important economic role, particularly in these key areas.⁷



As is seen by the figure, there has been unprecedented growth in donations in 2010 up to 5% of GDP, but this high level may be an outlier, since a level of 0.1-0.2% of GDP has been more typical. There are indications that donations have continued on a high level in 2011-12, but whether this will continue, depends on the future profitability of the foundation-owned companies as well as pay-out ratios. A continuing financial and economic crisis may make it harder to sustain high profits, and pay-out ratios may have to fall as companies rely more on self-financing rather than bank loans.

⁷ See our working paper on charitable donations of industrial foundations (Rao and Thomsen, 2012).

Discussion

Industrial foundations matter to the Danish economy. They account for 5-10% of economic activity depending on measurement, perhaps 20% of Denmark's international business activity and more than 50% of both stock market capitalization and R&D. This is a significant, although not dominant part of the Danish economy.

Obviously, presence is not the same as contribution. We cannot say, for example, that the alternative to activity generated by foundation-owned companies would be no activity. The same companies could have been owned by founding families, financial investors or other owners. Depending on the counterfactual the same companies might in principle have contributed less, the same or more to the Danish economy. Answering such questions requires a research design which compares economic performance across ownership forms. This we leave for future research.

However, we did uncover some new evidence that industrial foundations exert a stabilizing influence on the Danish economy. As a group the foundation-owned companies emerged the financial crisis relatively unscathed. They are less likely than listed companies to cut back on employment in a major way, and their financial indicators such as accounting returns are significantly less volatile. Finally, their exit rates are low. All of this, of course, must be investigated further by controlled statistical studies before a definite connection can be established.

There can be several reasons for this. First the industrial foundations should theoretically be risk averse since they have concentrated holdings and cannot rely on the law of large numbers to cancel out variations in firm specific risks. Secondly, many of them have a fiduciary duty as stated in their charters to preserve and develop the companies that they own. Third, the companies cannot attract outside capital to finance risky investment to the same extent as listed companies.

Risk aversion is not the full story, though. We know that the Danish industrial foundations invest significantly in research and development, which has uncertain and very long term returns. The same applies to their increasing involvement in international business activity. Compared to other firms in Denmark they appear to be entrepreneurial rather than conservative.

References

Thomsen, Steen. What Do We Know About Industrial Foundations? Working Paper, The Research project On Industrial Foundations. <http://www.tifp.dk/wp-content/uploads/2011/11/What-Do-We-Know-about-Industrial-Foundations.pdf>.

Rao, Clara og Steen Thomsen. Uddelinger og Omkostninger I danske Fonde. Working paper, The Research Project on Industrial Foundations. <http://www.tifp.dk/wp-content/uploads/2011/11/Danske-Fondes-uddelinger-og-omkostninger-VI-12.pdf>.